CLAIMS

What is claimed is:

1. A spindle motor comprising:

a rotating unit including a hub and a permanent magnet secured to said hub;

a stationary unit including a bracket and a stator core with a coil winding; and

a bearing unit including a fixed shaft mounted on said bracket, a bushing secured to said hub, a disc clamp centering tube and at least one bearing element supporting said bushing for its rotation with respect to said shaft,

wherein said disc clamp centering tube is welded to the hub of the rotating unit.

2. The spindle motor according to Claim 1, wherein said at least one bearing element is a hydrodynamic bearing.

3. The spindle motor according to Claim 1, wherein said at least one bearing element is a conical hydrodynamic bearing.

4. The spindle motor according to Claim 1, wherein said at least one bearing is a ball bearing.

5. The spindle motor according to Claim 1, wherein said disc clamp centering tube and said hub are made from the same material.

6. A bearing unit for use in a spindle motor comprising:

a shaft;

a hub;

a bushing; and

a disc clamp centering tube,

wherein said disc clamp centering tube is welded to said hub.

7. The bearing unit for use in a spindle motor according to Claim 6 further comprising at least one bearing element.

8. The bearing unit for use in a spindle motor according to Claim 7, wherein said at least one bearing element is a hydrodynamic bearing.

9. The bearing unit for use in a spindle motor according to Claim 7, wherein said at least one bearing element is a conical hydrodynamic bearing.

10. The bearing unit for use in a spindle motor according to Claim 7, wherein said at least one bearing is a ball bearing.

11. The bearing unit for use in a spindle motor according to Claim 6, wherein said disc clamp centering tube and said hub are made from the same material.